



Form GSOP 1-PIN (04/98)

STATE OF CALIFORNIA  
Department of General Services - Office of Procurement

## PURCHASE ORDER

Page 1

Purchase Order No. Rev. Date  
62274 12/17/2008

Supplier No.	Solicitation No.	Delivery Date	FOB Point	Invoice Terms
758892	57171	120 Days ARO	Destination	
S h T i o P DEPT OF WATER RESOURCES SACRAMENTO CORPORATION YD 4300 WEST CAPITAL AVENUE WEST SACRAMENTO, CA 95691		C h T a T r o g e WATER RESOURCES A-36 ATTN: ACCOUNTS PAYABLE PO BOX 942836 SACRAMENTO CA 94236-001		
Agency Billing		Agency Purchase Estimate		Purchase Estimate Revision
81000		6000023410		67327 2
Agency Contact		Phone		Date Received
MIKE E. BINGAMAN		916-654-2522		

ROYAL TRUCK BODY  
4318 DUDLEY BLVD, # 475F  
MCCLELLAN, CA 95652  
Attn: RICK ARMLIN

Phone: 916-870-2290

Item No.	Quantity	Unit	Commodity Code	Description	Unit Price	Extension
THE GENERAL PROVISIONS FOR NON-IT COMMODITIES ARE HEREBY INCORPORATED BY REFERENCE. THESE GENERAL PROVISIONS CAN BE OBTAINED BY PHONING (916) 375-4400 OR BY ACCESSING OUR WEBSITE AT: <a href="http://www.documents.dgs.ca.gov/pd/modellang/EPnonIT0407.pdf">www.documents.dgs.ca.gov/pd/modellang/EPnonIT0407.pdf</a>						
THE FOLLOWING INFORMATION IS PROVIDED FOR AGENCY USE ONLY:						
PRIME CONTRACTOR: NS FISCAL YEAR: 2008-2009						
<u>FURNISH AND INSTALL</u> To include equipment, delivery, labor, installation, start-up adjustment and training for designated personnel as necessary for a <u>complete turnkey installation</u> .						
1	10	EA	2510-002-1806-3	BODY SERVICE Truck Service Body, eight (8) foot as described meeting the requirements of the attached Specification # 13R-14R-2008-01 of ten (10) pages, dated October 2008, with <u>NO</u> additional Body Options as stated in Section 3.	7,215.0000	72,150.00
Brand: <u>ROYAL TRUCK BODY</u> Model: <u>40-V0-98</u>						
2	1	EA	2590-870-0002-0	COMPONENT VEHICLE (AS DESCRIBED) Truck Service Body, eight (8) foot as described meeting the requirements of the attached Specification # 13R-14R-2008-01 of ten (10) pages, dated October 2008, with the Sliding Roof Body Option as stated in Section 3B.	7,916.0000	7,916.00
Brand: <u>ROYAL TRUCK BODY</u> Model: <u>40-V0-98</u>						

Sales and/or use tax to be extra unless noted above

Buyer  LONNIE WILLIAMS	Phone 916-375-4586	BOC Number
------------------------------	-----------------------	------------

## Department of General Services - Office of Procurement

## Form GSOP 2-PIN (04/98)

Page 2 (Last)

<i>Purchase Order No.</i>	<i>Revision</i>	<i>Date</i>	<i>Supplier No.</i>	<i>Supplier Name</i>
62274		12/17/2008	758892	ROYAL TRUCK BODY

Item No.	Quantity	Unit	Commodity Code	Description	Unit Price	Extension
3	1	EA	2590-870-0002-0	COMPONENT VEHICLE (AS DESCRIBED) Truck Service Body, eight (8) foot as described meeting the requirements of the attached Specification # 13R-14R-2008-01 of ten (10) pages, dated October 2008, with Compartment Lighting Body Option as stated in Section 3A and Sliding Roof Option as stated in Section 3B.	8,807.0000	8,807.00
				Brand: <u>ROYAL TRUCK BODY</u>		
				Model: <u>40-VQ-98</u>		
Total Value:						88,873.00
<p><b>ATTACHMENTS</b></p> <p>THE FOLLOWING ATTACHED DOCUMENTS ARE PART OF THIS PURCHASE ORDER.</p> <p>1. ADMINISTRATIVE REQUIREMENTS # AR-13R-14R-2008-01 OF FOUR PAGES, DATED OCTOBER 2008.</p> <p>2. SPECIFICATIONS #13R-14R-2008-01 OF TEN (10) PAGES, DATED OCTOBER 2008.</p> <p><b>F.O.B. DESTINATION</b></p> <p>For the purpose of this order only F.O.B. Destination will be accepted.</p> <p><b>PRE-INSTALLATION MEETING</b></p> <p>Supplier will schedule a pre-installation meeting within seven (7) days of receipt of the purchase order. The meeting will be held at the State's facility, between the supplier's representative and members of Department of Water Resources.</p> <p>This meeting shall take place at no cost to the State. Pre-installation meeting will be held at the State's address listed below:</p> <p>Department of Water Resources Corporation Yard 4300 West Capitol Ave. West Sacramento, CA 95691 Contact Person: Allan Wong Phone:(916) 653-9043 or (916) 798-2380 Stan Randall Phone:(916) 653-9043 or (916) 216-8376</p> <p><b>CHANGE ORDERS</b></p> <p>This Purchase Order may be amended, modified, or terminated at any time by mutual agreement of the parties in writing. Change orders amending, modifying or terminating the Purchase Order, including any modifications of the compensation payable may be issued only by the State Procurement Officer. All such change orders shall be in writing and issued only upon written concurrence of the supplier. Termination, as that term is used in this section, does not include termination for default of the supplier.</p> <p><b>SCPRS REGISTRATION</b></p> <p>This Purchase order has been registered into the state contract and procurement registration system (<a href="https://www.scprs.dgs.ca.gov/">https://www.scprs.dgs.ca.gov/</a>). The registration number is 38601208348467.</p>						

## ADMINISTRATIVE REQUIREMENTS

### 1. PICKUP AND DELIVERY

The body shall be installed on a State-furnished cab and chassis. Vendor shall pick up the cab and chassis at the Department of Water Resources' Corporation Yard and return the completed units to the same location:

4300 West Capitol Ave.  
West Sacramento, CA 95691

Inspection, delivery and final acceptance of all units on the purchase order shall be within 120 days after receipt of order. Failure to meet the delivery deadline may put the supplier in default.

### 2. DELIVERY

Each unit and any accessory shall be delivered completely assembled and ready for operation.

Supplier shall be responsible for, and bear all costs associated with, the delivery and unloading of each unit.

Each unit shall be delivered during normal business hours, Monday –Friday, 7:30 AM to 3:30 PM, except State Holidays.

Deliver To: Department of Water Resources  
Corporation Yard  
4300 West Capitol Ave.  
West Sacramento, CA 95691

### 3. INSPECTIONS

#### In-Process Inspection:

Prior to final assembly, the first unit on the order shall be inspected during fabrication to determine timely manufacture, verify build quality, and to identify and resolve any discrepancies with the contract specification. This in-process inspection will take place at the manufacturer's facility and will be conducted by State personnel. The supplier shall call the California Department of Water Resources, Fleet Management Engineering Section, at (916) 653-7681 when the first unit on the order is considered to be at least 50% complete and/or prior to the permanent installation of major components.

A written inspection report will be submitted to the supplier indicating that the unit is either acceptable or unacceptable. If a unit is determined unacceptable, the inspection report will list those deficiencies that must be corrected to make the unit acceptable. All deficiencies must be corrected prior to final assembly.

Pre-Delivery Inspection:

Prior to final shipment to the delivery destination as indicated on the purchase order, each unit shall be inspected by State personnel to determine compliance with the contract specification. The supplier shall call the California Department of Water Resources, Transportation Office, at (916) 653-9051, when a unit is complete and ready for inspection. The inspection shall be held at the supplier's place of business in California.

Each unit shall be serviced, washed and ready for inspection. Where applicable, the supplier shall complete and sign the supplier pre-delivery inspection (PDI) form and the supplier shall note the appropriate Purchase Order number and line item on each form.

A written inspection report will be submitted to the supplier indicating that the unit(s) is either acceptable or unacceptable. If a unit is determined unacceptable, the inspection report will list those deficiencies that must be corrected to make the unit acceptable. All deficiencies must be corrected prior to final shipment. If necessary, State personnel will re-inspect each unit to determine compliance.

Once a unit is determined to be acceptable, the supplier can commence shipment of said unit. The inspection report must state "OK to ship" or "OK to deliver" before the supplier can ship each unit.

Final Inspection:

After delivery of each unit, the State will conduct a final inspection to check for shipping damage, determine that all deficiencies have been corrected, and verify receipt of all required documents and manuals. The State will have five working days, starting from the date that the State receives the unit and all required documentation, to conduct a final inspection.

If the unit is deemed unacceptable, the supplier must remedy, at the supplier's expense, all deficiencies within seven days after receipt of written notification. The supplier shall remove said item from the State's facility if major corrections are required. The supplier must correct any deficiencies noted at the final inspection before the unit will be considered for final acceptance and payment. Delivered units will not be considered for final acceptance and payment until all required documents (i.e., invoice, vehicle registration documents, weight certificate, warranty information, certifications, etc.) are received by the Department of Water Resources.

Acceptance of delivery or placement in operation of any unit shall not release the manufacturer from liability for faulty design, workmanship, or a material appearing even after final payment has been made.

4. VEHICLE REGISTRATION DOCUMENTS REQUIRED

Each unit will be registered with the State of California, Department of Motor Vehicles, and licensed for on-highway use by the Department's Transportation Office. All documentation supplied for registration shall contain the following Physical and Post Office Box addresses:

State Department of Water Resources  
1416 9<sup>th</sup> Street  
Sacramento, CA 95814

State Department of Water Resources  
P. O. Box 942836  
Sacramento, CA 94236-0001

A final stage manufacturer's label shall be affixed to the completed vehicle in accordance with FMVSS and the supplier shall furnish a weight slip, from a certified weight master, showing the vehicle tare weight for each unit at the time of delivery.

5. WARRANTY

The manufacturer shall guarantee that each unit to be a product of good workmanship, and shall be free from defects in workmanship and materials for a minimum period of one (1) year, 1000 hrs, or 12,000 miles, whichever occurs first. The warranty shall start on the first day The Department of Water Resources puts the unit into service.

This warranty shall cover the entire unit (i.e., bumper to bumper), including special modifications and any optional equipment or accessories being supplied, and shall be for 100 percent parts and labor of all repair costs. A copy of the manufacturer's warranty for each complete unit shall be supplied with each unit.

The supplier shall be responsible for all costs associated with pickup and delivery of units requiring warranty repair. The supplier may elect to repair the unit via traveling mechanic. All costs associated with truck rental, travel time, per diem, etc., shall be burden by the supplier.

6. MANUALS

Vendor shall provide a copy of necessary functional manuals, adjustment manuals, schematic diagrams and parts catalogues, for each unit purchased, all manuals shall be in the English language.

7. PARTS

Parts for equipment are to be available for each model and available for purchase by the State at no greater cost than published list prices.

8. PAYMENT

Process for payment will be initiated after each unit on the purchase order is received and deemed acceptable. All discount periods start after final acceptance of each unit on the purchase order.

State of California  
The Resources Agency  
Department of Water Resources  
Division of Operations and Maintenance  
Fleet Management Office

13R-14R-2008-01  
Utility Body,  
Standard Profile,  
3/4-ton Cab and Chassis

October 2008

SPECIFICATION

The intent of this specification is to describe the minimum requirements for a standard-profile eight foot utility body and the turnkey installation onto twelve (12) 3/4-ton truck cab and chassis having single rear wheels.

1. STATE-FURNISHED VEHICLE

The State-furnished, 3/4-Ton, Cab and Chassis are 2008 Ford F250 "Box Off" or "Pickup Bed Deletes" with Gas Engines and Automatic transmissions. There are four (4) two wheel drive (2WD) chassis; one (1) is a "Super" cab and three (3) are "Regular" cabs. There are eight (8) four wheel drive (4WD) chassis; seven (7) of them are "Super" cabs and one (1) is a "Regular" cabs.

GVWR 2WD Chassis: 8,800 lbs. (Regular Cab); 9,000 lbs. (Super Cab)

GVWR 4WD Chassis: 9,000 lbs. (Regular Cab); 9,200 lbs. (Super Cab)

Outside Dimension of Rear Tires (Single Rear Wheels): 78.5-inches

Wheelbase: 137-inches (Regular Cab); 158-inches (Super Cab)

Cab to Axle: 56.2-inches

Back of Cab to End of Frame: 96.5-inches

2. BODY

This section describes the standard configuration for the twelve bodies. Section 4, "BODY OPTIONS," will list optional items that will be added to some of the bodies. These optional items are in addition to the standard body described in this section and will be listed on the purchase order detailing which options are added along with the price for those options.

The body shall be welded steel construction suitable for the above Cab and Chassis and shall have the following dimensions:

Body Length: 96 inches  $\pm$  2 inches.

Body Width: 80 inches  $\pm$  2 inches (Shall have adequate clearance for tires).

Body Height: 38 inches  $\pm$  2 inches.

Bed Width: 48.5 inch (minimum)

Compartment Depth: 16 inches  $\pm$  1 inch.

The body shall have six compartments, top opening boxes with all dividers supplied, and continuous drip rails. The width of the compartments shall be the manufacturer's standard design for an 8-foot body. The steel used in the construction of the body shell shall be 14 gauge thickness (minimum) and the steel used in the construction of the floor shall be 12 gauge diamond plate (minimum).

The body shall have a hinged tailgate that is 12 inches  $\pm$  2 inches tall with retainer mechanism to hold the tailgate in the horizontal position when open and a slam or a twist handle latch.

All exposed edges of fenders, door panels, shelving, etc., shall be folded, beaded or otherwise stiffened and ground smooth.

*Each compartment shall have a drainage outlet sealed with a rubber plug.*

All compartment shelves shall be removable and have minimum one-inch lip.

- a. Front vertical compartments: Street side compartment shall have two adjustable shelves. Curbside compartment shall have two divider tray shelves with all dividers furnished.
- b. Horizontal compartments: One side shall have one shelf. Opposite side shall have one or two bins with dividers on 4-inch centers; all dividers shall be furnished.
- c. Rear vertical compartments shall have three material hooks each. Rear of body shall have the stop/turn/tail and backup lights, as well as, the backup alarm, mounted using rubber grommets in the rear compartments of the body, those compartments shall have a protective metal structure (Guard) to protect the inside portion of the rear lights. This guard shall also prevent access to the lock mechanism and interior of the compartment when the grommet-mounted lights are removed, to prevent theft.
- d. Compartment doors shall open outward, be recessed and weatherproof. The doors shall incorporate recessed or flush-mounted latches, and locks that are all keyed alike. Stainless Steel twist latches that provide a three-point locking connection shall be utilized on all doors. All doors shall have 2-wall construction and be reinforced with stiffeners.

All vertical doors shall have double spring over-center retainers or self-supporting pneumatic struts to prevent open doors from striking side of body or cab.

Both horizontal doors shall have restrainers to hold doors in horizontal position when open and shall have flat, smooth interior surfaces suitable for use as a writing surface.



- e. Master Locking System: The utility body shall be equipped with the manufacturer's standard master locking system, one for each side of the body. Each master locking system shall lock all three compartments on one side.
- f. Material Rack: The utility body shall be equipped with a fork lift loadable heavy duty material rack with removable rear cross bar.

There shall be four recessed D-rings near each bottom corner of the bed load space for the purpose of tying cargo down to the bed floor. The front section of the load space shall have drainage outlets in the floor.

The bottom of the utility body shall be at the same level as the bottom of the cab rocker panel. The body shall be mounted to the cab and chassis frame in a minimum of four (4) places, using a shear plate mounting design. "U" bolt mounting is not acceptable. The front shear plate mounts shall incorporate a flexible mounting system that will allow the chassis frame to flex without distorting the utility body. The flexible mounting system shall consist of springs on the front mounting bolts or other method that allows differential movement of the body and frame. The rear of the body shall be mounted to the truck frame behind the rear-most spring hanger.

Shear plate mounting plates shall be bolted to the frame web using two 1/2 inch grade 8 bolts (minimum). All mounting fasteners shall be a minimum 1/2 inch grade 8 bolts and lock nuts. Holes drilled into the top or bottom flange of the chassis frame is not acceptable. Holes drilled in the web of the frame shall be a minimum of 1-1/2 inches from either flange. There shall be no welding or flame cutting on the chassis frame. Steel, not wood, shall be used for spacers between the body and chassis frame if spacers are necessary.

A gap of 1 to 3 inches shall exist between the body and the cab upon final installation of the body.

The body shall be provided with wheel housing clearance for tire chain clearance in accordance with SAE J1232. The body shall be installed with fuel tank filler assembly. The filler neck shall be installed such that the operator can easily fill the fuel tank from the outside of the vehicle. The filler assembly shall be braced and secured as required.

### 3. BODY OPTIONS

The following options shall be provided if indicated on the purchase order to the standard body described in section 3, "BODY." The options shall be individually priced.

- A. Compartment Lighting: All compartments shall be equipped with a dome style compartment light (six lights total) that are independently operated from inside the compartment wired to a master switch located

on the dash. The switch shall be battery hot, labeled as compartment lights, and shall illuminate when in the on position.

- B. Sliding Roof: The utility body shall be equipped with the manufacturer's standard sliding roof to completely cover and enclose the bed. The roof shall be a low profile, telescopic, sliding metal cover-type and shall be installed over the bed. It shall have a lockable end gate enclosure that mates with the tailgate to completely enclose and secure the bed area. The roof shall incorporate position lock capability that enables the operator to lock the roof into a fully open and fully closed position. Drain holes in the front floor of the bed shall incorporate a plastic plug to prevent dust and water from entering the enclosed bed.

4. CAB GUARD

The utility body shall be equipped with a steel cab guard made using steel square tubing and sheet metal with a window made from expanded metal or sheet metal with a punched pattern. It shall be permanently welded and properly supported.

5. BUMPER

There shall be a minimum 1/8-inch thick, steel-tread plate ("diamond plate") step-type rear bumper securely attached to the truck frame. Bumper shall extend out from the body at least 6 inches, but not more than 9 inches.

6. TRAILER HITCH AND ACCESSORIES

A receiver hitch shall be installed through or beneath the rear bumper, and shall be securely attached to the truck frame. The hitch shall comply with the applicable sections of SAE Standard J684 for a Class 4 hitch capable of towing a 10,000-pound (minimum) GVWR trailer (capacity of hitch shall be clearly labeled). The hitch/bumper shall be equipped with either two "D" ring-type safety rings or cut-outs of adequate size and strength to secure a 3/8-inch safety chain and 10,000-pound trailer. A step bumper with an integral Class 4 hitch is an acceptable configuration.

Towing Hooks, two on the front and two on the rear of the vehicle (four total). One located each corner to allow connection of chain to assist in vehicle removal (Reference Holland model TH-1257-AR and -AL or equivalent). The hook shall be rated at a minimum of 10,000-pound drawbar pull. Adequate bracing and support shall be provided and the hooks shall be easily accessible.

7. ELECTRICAL

The body shall have lights and reflectors as required by the Federal Motor Vehicle Safety Standards and the California Vehicle Code, including two (2) backup lights and a lighted license plate holder. All lights installed on the body shall be L.E.D. flush or recessed-type, mounted in rubber grommets. Red turn and stop lights shall be L.E.D. (Ref. Grote Model 62391, Truck-Lite Model 4050 or equivalent). Side markers and the three rear identification lights shall be L.E.D. 2-1/2 inch diameter lights with built-in reflector (Ref. Grote Model 40092 and 40093, Truck-Lite Model 1050 and 1050A, or equivalent).

- a. Taillights shall be installed in the rear vertical compartment of the utility body. Protective metal structure shall be installed in the compartment to protect the inside portion of the rear lights.
- b. The rear bumper shall incorporate two (2) seven-conductor electrical receptacles for a truck-trailer jumper cable.

The first receptacle shall be a round pin style with seven conductors that meets the SAE J560 standard and shall be a flush-mounted socket (Ref. Pollak 11-720 or equivalent). This receptacle shall be wired per the attached drawing # MEO-BP-01.

The second receptacle shall be a flat pin RV style with seven conductors and shall be a flush-mounted socket (Ref. Pollack 11-893 or equivalent). This receptacle shall be wired per the attached Pollack drawing #IS-64.

- c. An electric, weatherproof, backup alarm shall be installed at the rear of the vehicle and can be either the rubber grommet mounted or standard bracket type mount. Alarm shall have an automatic adjusting, variable sound range from 87 to 112 dB(A) (Ref. Acorn Products Model 1D-112AA, Ecco model SA940, or equivalent).
- d. All wire harnesses and reflectors shall be mechanically attached to the vehicle. Adhesive mounting will not be acceptable. Run all wires in either plastic loom or steel conduit. The use of "Scotch-Locks" is not acceptable. All connections shall be weatherproof. Grommets shall be used to run wires through any metal cutouts.

8. PAINT

All metal surfaces shall be finish painted. All metal surfaces to be painted shall be cleaned and primed as necessary. The finish coat shall be automotive enamel; color to match cab (White), and be free from runs, drips, sags, etc., and shall be evenly applied to provide a gloss finish.

All interior compartment surfaces shall be finish painted and shelves and bins shall be galvanized. Interior compartments may be painted the body manufacturer's standard interior color and may be different from the exterior.

The entire underside of body shall be covered with an industry standard under-seal coating. Any mounting scars due to mounting body and equipment shall be repainted.

9. MISCELLANEOUS

- a. Mud flaps (No Logo) shall be installed behind the rear wheels.
- b. Spare Tire Mount for Spare Tire and Wheel Supplied with Chassis.

10. DESIGN AND WORKMANSHIP

Component parts of each unit shall be new (unused), current model year production, and of proper size and design to safely withstand the maximum stresses imposed. The equipment shall be provided with components, accessories, materials, design practices, and workmanship that are the best available in the industry for the equipment type, and the operational conditions to which the equipment will be subjected. Component parts shall be designed and manufactured to give maximum performance, service life, and safety. The equipment shall be a product of good workmanship and shall be free from any defects that will affect their appearance, use, or serviceability.

Material:

Construction shall be of all new (unused) material free of rust and any defects. All structural components in the assembly shall be fabricated from a single piece of material. Spliced components are not acceptable. Brackets, gusset plates, etc. to be welded shall be of the same material as the adjoining material. The finished product shall be free of dents and warpage. The use of body filler is unacceptable.

Fasteners:

Nuts, bolts, and washers shall comply with the most current engineering and manufacturing practices and standards. Frame (flange) bolts and nuts shall be used to attach components to vehicle frame. Frame bolts and nuts shall be of compatible material to prevent electrolysis with frame member. Bolt lengths shall be such that a minimum of two threads shall extend beyond the nut when tightened. Nuts shall be the locking type.

Structural members shall use SAE Grade 8, or better, bolts with matching nuts.

Non-structural members shall use SAE Grade 5, or better, bolts with matching nuts.

Metal Shaping:

All breaks shall be free of cracks. Radii shall be at least twice the thickness of the material or in accordance with the requirements established by ASTM for the particular material being formed, whichever is greater. All holes shall be round, of the proper dimension, perpendicular to the material they are produced in, and finished smooth. Oblong holes or holes drilled, bored, etc. at angles are not acceptable. Holes and slots shall be drilled, punched, saw cut, plasma cut, or milled; torch cut is unacceptable. Sharp corners on all material shall be rounded smooth to prevent injury.

Welding

Welding shall comply with the most current standards as set forth by American Welding Society (AWS) and American National Standard Institute (ANSI).

Intermittent or spot welds shall be spaced and proportioned to provide ample strength for the material being welded. Weld sizes not indicated shall be equal to the thickness of the least of the joined plates

All welds shall be properly fused, displaying proper penetration and a professional finish, and must meet the qualification requirements of applicable AWS specifications. Examples of unacceptable welds are:

- |    |          |    |                    |
|----|----------|----|--------------------|
| a. | Cracks   | d. | Excessive Splatter |
| b. | Undercut | e. | Blow Holes         |
| c. | Overlap  | f. | Slag Entrapment    |

Any weld failing to comply with the AWS specification, or failing to pass a quality assurance inspection performed by the State, shall be corrected by the manufacturer at the manufacturer's expense, and be corrected off State property. Only a welder who is AWS certified to perform the type, size, and position of the weld in accordance shall correct deficient welds.

Grinding of welds must have prior approval of the Department of Water Resources' Mobile Equipment Office engineering staff. Welds that have been ground without approval shall be subject to complete re-welding upon request, at no additional cost to the State. The covering of welds with body fillers or similar materials is unacceptable. Warpage of assembled parts is unacceptable.

11. Electrical System

Minimum electrical equipment shall comply with all Federal Motor Vehicle Safety Standards and State of California Department of Motor Vehicle regulations. All lights, signals, and markers shall be recessed, mounted in rubber grommets, unless otherwise specified. Mounting holes for lights shall be the proper dimension as recommended by the manufacturer. Mounting holes shall be punched, plasma cut, or saw cut and finished smooth; torch cut holes are unacceptable.

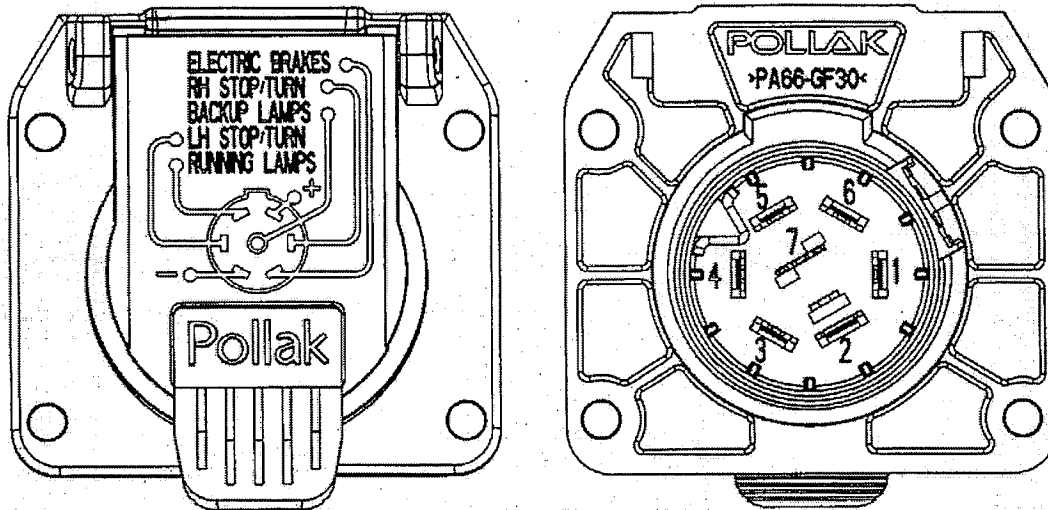
All wiring installed shall be the stranded copper type and shall have cross-linked polyethylene insulation. All wiring shall be protected in plastic loom or conduit, unless otherwise specified. Wire gauges shall be in accordance with SAE standards for distance from power source and load demand. The ends of all stranded conductors cut shall be mechanically stripped and fitted with insulated type terminals. The terminals shall be mechanically crimped securely with appropriate tool(s). All splices and connections shall be sealed against moisture. Scotch Lock wire-piercing devices shall not be used. Ground return connections shall be attached to the vehicle frame, body and/or engine.

The edge of all metal members, which a wire harness or loom pass through, shall be deburred and bushed with suitable grommets. In general, wire routing shall be such that maximum protection is provided by the vehicle sheet metal and structural components. All wiring shall be mechanically secured to prevent sagging and movement. Adhesive type mounting will not be accepted. Electrical devices, lamps, etc., requiring periodic service and/or removal shall be provided with adequate wire length for ease of access.

#### 11. RULES, REGULATIONS, STANDARDS

The following rules, regulations, and standards shall apply to each unit supplied:



- A. Federal Motor Vehicle Safety Standards (FMVSS).
- B. California Vehicle Code.(CVC)
- C. California Code of Regulations (CCR), Title 13, "Motor Vehicles" and Title 8, "General Industry and Construction Safety Orders".
- D. Occupational Safety and Health Agency (OSHA)
- E. Society of Automotive Engineers (SAE)
- F. American Society of Mechanical Engineers (ASME)
- G. American Society for Testing and Materials (ASTM)
- H. American National Standards Institute (ANSI).
- I. American Welding Society (AWS).
- J. National Electric Code (NEC).

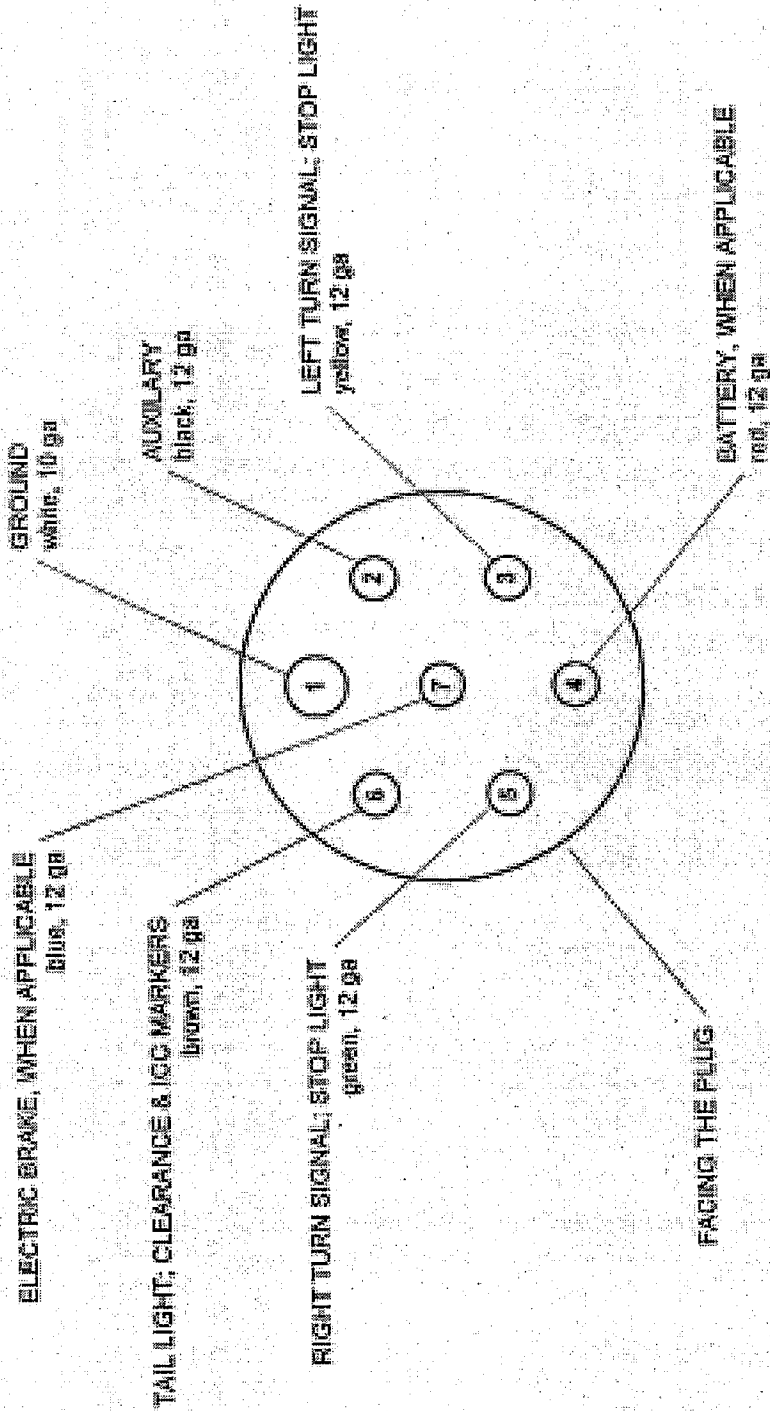


7-WAY USCAR SOCKET  
EXAMPLE: 11-893

POS	COLOR	GAUGE	SIGNAL
1	RED	14	LEFT TURN AND STOP
2	WHITE	10	GROUND
3	BLUE	12	ELECTRIC BRAKES
4	GREEN	14	RIGHT TURN AND STOP
5	BLACK	10	BATTERY
6	BROWN	14	RUNNING LAMPS
7	YELLOW	14	BACKUP LAMPS

USED IN 11-893, 11-990, 11-897, 11-898, 11-899

 <b>STONERIDGE</b> ACTUATOR & SENSOR PRODUCTS GROUP	1-16-04	A2156	A	Release Print	AG <input checked="" type="checkbox"/>
	DATE	ECO	REV	DESCRIPTION OF CHANGES	DR <input checked="" type="checkbox"/> CK
	APPROVAL SIGNATURE				
<b>PROPRIETARY NOTICE</b> THE DESIGN AND TECHNICAL INFORMATION APPEARING ON THIS DRAWING IS THE PROPERTY OF STONERIDGE CONTROL DEVICES INC. AND IS DISCLOSED IN CONFIDENCE. IT IS NOT TO BE COPIED, REPRODUCED, REVEALED TO OR APPROPRIATED BY OTHERS, EITHER IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN CONSENT OF STONERIDGE CONTROL DEVICES, INC.		SC	DRAWING TITLE		
THIS DRAWING PREPARED IN ACCORDANCE WITH ASME Y14.5M-1994		UNLESS OTHERWISE SPECIFIED DIM ARE IN INCHES TOLERANCES ARE: .XX ± .01 .XXX ± .005 XX" ± 2"	INSTRUCTION SHEET		
 3RD ANGLE PROJECTION		MATERIAL/FINISH			
		NA			
PART VOLUME:		CAD TYPE	DWG SIZE	DRAWING NUMBER	
DRAWN BY	DATE	CHECKED BY			
AG	1-16-04	JB	ACAD A	IS-64	
				REVISION	
				A	

**NOTE:**

1. Use (7) wire rubber covered cable with (1) 10 ga and (6) 12 ga wires.
2. Use combination STOP, TAIL, and TURN lights.
3. Reference POLLAK 11-721 plug.

**STATE OF CALIFORNIA**  
**DEPARTMENT OF WATER RESOURCES**  
**DIVISION OF MANAGEMENT SERVICES**  
**MOBILE EQUIPMENT OFFICE**

**WIRING DIAGRAM FOR TOW VEHICLE BUMPER PLUG**

SCALE	N/A	DATE	3 - 15 - 2000	DWG. #	
DRWN	J Yang	FILE			MEO - BP - 01
CHECK		APPROVED			SHEET 1 OF 1